

# NRL Ocean EDR JPSS – cal val

Rehearsal August 23 2011

# Status

- Data stream
- Aeronet Matchup tool
- Data flow to cal val team
- Vicarious calibration

## Plans

- Evaluate vicarious cal val tool
- Apply “gains” to satellite SDR processing (LUT)
- Apply uncertainty index to Vicarious calibration
- Develop “synthetic” Aeronet capability → se

# DATA

## NCT4 Download Access 8/22/2011 (11:46-15:20 EST)

Type	Total	Obtained	Size (MB)	Time (min)
GMODO	1915	0		
SVM01	405	369	2,723	33
SVM02	364	327	2,230	26
SVM03	388	357	3,291	42
SVM04	385	352	3,755	83
SVM05	426	134	1,233	26
SVM06	396	0		
SVM07	384	0		

Downloaded VIIRS SDR (SVM01 to SVM07) and VIIRS GEO (sequentially)  
Transfer Rate slowed as day progressed.

Stopped after internet connection failure around 15:20 EST



## Established "Golden Regions"

[<Rehearsal Links>](#)

### Display Regional Pages:

With this form you can select regional specific pages. A graphic depicting the general area of each region is below.

Choose a Location:

\* Indicates a satellite only area.



Site Name	Satellite Status	Insitu Status
WaveCIS Site 6		
Palgrunden		
Martha's Vineyard		
Lucinda Jetty		

# Aeronet Data stream – August

## MODIS, MERIS, VIIRS Proxy

Guide to the color codes:

**GOLD** Data within the three days.

**RED** Data available, but not recently.

**BLUE** Area/Satellite combination not running (likely intentional).

**Script last ran:** 15:45; 22-August,2011

**Files in work directory:** 191; **Files to be processed:** 3094.

**Previous files in work directory:** 173; **Previous files to be processed:** 3094.

**High/Low number of files in work directory:** 3383, 0.

**High/Low number of files to be processed:** 3094, 0.

\* Note: High/Lows calculated since 0800 1 July 2011.

Area	modis	viirs	meris
AAOT	NO RECENT DATA	NO RECENT DATA	RECENT DATA
Aloha	RECENT DATA	N/A	RECENT DATA
BATS	NO RECENT DATA	N/A	RECENT DATA
BalticSea	NO RECENT DATA	NO RECENT DATA	NO RECENT DATA
BlackSea	RECENT DATA	N/A	RECENT DATA
ChesapeakeBay	RECENT DATA	NO RECENT DATA	RECENT DATA
EastSea	N/A	N/A	RECENT DATA
GDAT	NO RECENT DATA	NO RECENT DATA	RECENT DATA
GageochoSeaprim	RECENT DATA	RECENT DATA	RECENT DATA
Gloria	NO RECENT DATA	NO RECENT DATA	RECENT DATA
Gomex	RECENT DATA	N/A	RECENT DATA
GreatLakes1km	RECENT DATA	NO RECENT DATA	N/A
GulfOfCali	NO RECENT DATA	N/A	RECENT DATA
GulfOfMaine	RECENT DATA	NO RECENT DATA	N/A
GulfOfThailand	RECENT DATA	N/A	RECENT DATA
HCMCity	RECENT DATA	N/A	RECENT DATA
Helsinki	NO RECENT DATA	NO RECENT DATA	RECENT DATA
KORDI	NO RECENT DATA	N/A	N/A
LigurianSea	NO RECENT DATA	N/A	N/A
LucindaJetty	RECENT DATA	RECENT DATA	RECENT DATA
MVCOX	NO RECENT DATA	NO RECENT DATA	RECENT DATA
MissBight	RECENT DATA	N/A	RECENT DATA
Monterey	NO RECENT DATA	N/A	RECENT DATA
NYBight	RECENT DATA	NO RECENT DATA	N/A
NorthAtlanticGyre	NO RECENT DATA	N/A	RECENT DATA
NorthAtlanticGyreX	NO RECENT DATA	N/A	N/A
NorthEastAustralia	RECENT DATA	RECENT DATA	RECENT DATA
NorthEastPacific	NO RECENT DATA	N/A	RECENT DATA
NorthPacificGyre	RECENT DATA	RECENT DATA	RECENT DATA
NorthPacificGyreX	NO RECENT DATA	N/A	N/A
OregonInsitu	NO RECENT DATA	N/A	RECENT DATA
Palgrunden	NO RECENT DATA	NO RECENT DATA	RECENT DATA
PersianGulf	NO RECENT DATA	RECENT DATA	RECENT DATA
Philippines	RECENT DATA	N/A	RECENT DATA
RedRiver	RECENT DATA	N/A	RECENT DATA
SOIN_01	RECENT DATA	N/A	RECENT DATA
SenegalCoast	NO RECENT DATA	N/A	RECENT DATA

Site Name	Satellite Status	Insitu Status
WaveCIS Site 6		
Palgrunden		
Martha's Vineyard		
Lucinda Jetty		
Long Island Sound		
Helsinki		
Gloria		
Gustav Dalen Tower		
Eureka		
Chesapeake Bay		
Venice		
Abu Al Bukhoosh		
Santa Barbara		
Newport		
Monterey		
MOBY		
North Pacific Gyre		
South Pacific Gyre		
South Atlantic Gyre		
North Atlantic Gyre		
GageochoSeaprim		
Columbia River		
Boussole Buoy		
BATS		

Guide to the color codes:

**GREEN** Data within the last week.

**YELLOW** Data within the last month.

**RED** Data available, but not recently.

**BLACK** No Data Available (yet).



## Matchups:

### Parameters set:

### Example: AAOT/Venice

Site: AAOT\_62

Date Range: 2011 Jan, 1 - Aug, 18

Solar Zenith Range: -181 to 181; Solar Azimuth Range: -181 to 181

Sensor Zenith Range: -181 to 181; Sensor Azimuth Range: -181 to 181

APS Version: v4; Time Difference: +/- 22 hr

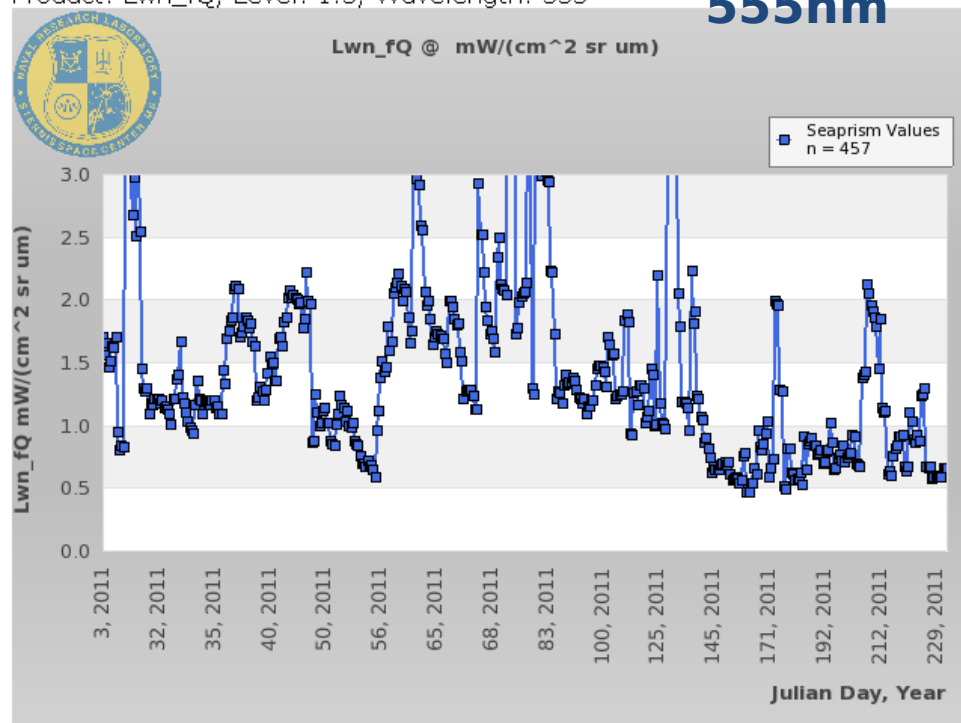
Satellite Box Size: 25km

Maximum Coefficient of Variance: 100; Standard Deviation: ; Minimum Percent Valid Pixels: 10.0

## Insitu:

Product: Lwn\_fQ, Level: 1.5, Wavelength: 555

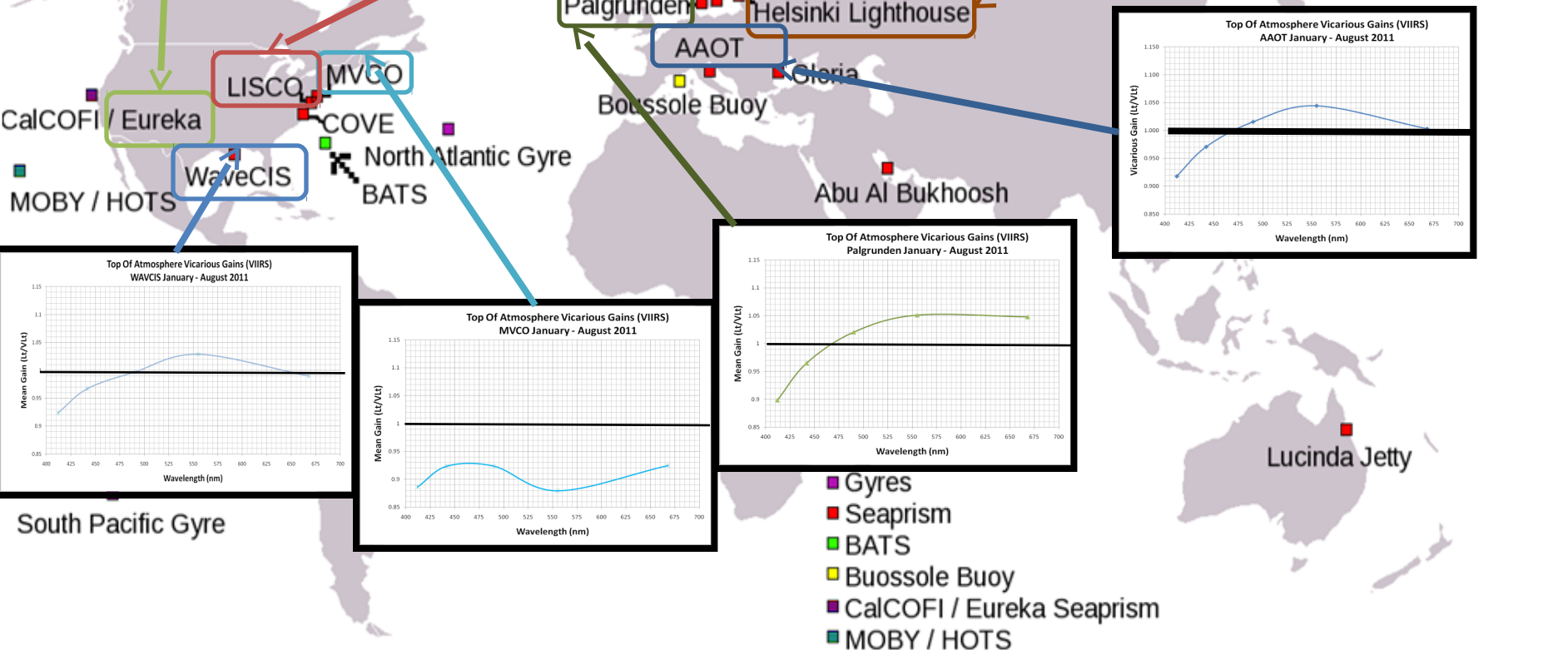
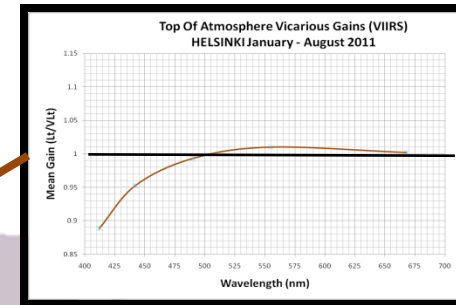
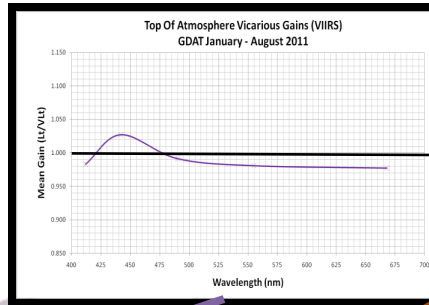
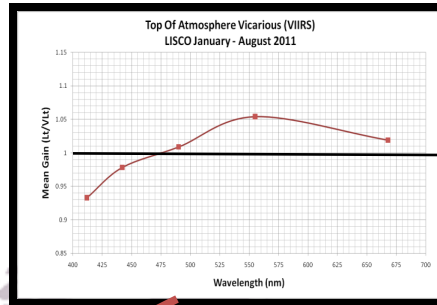
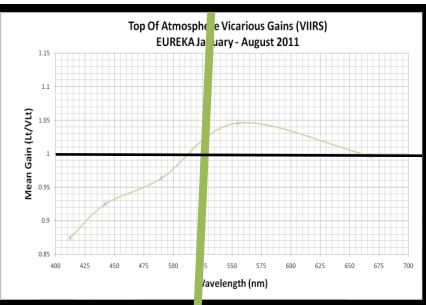
### 555nm



[Get CSV File](#)

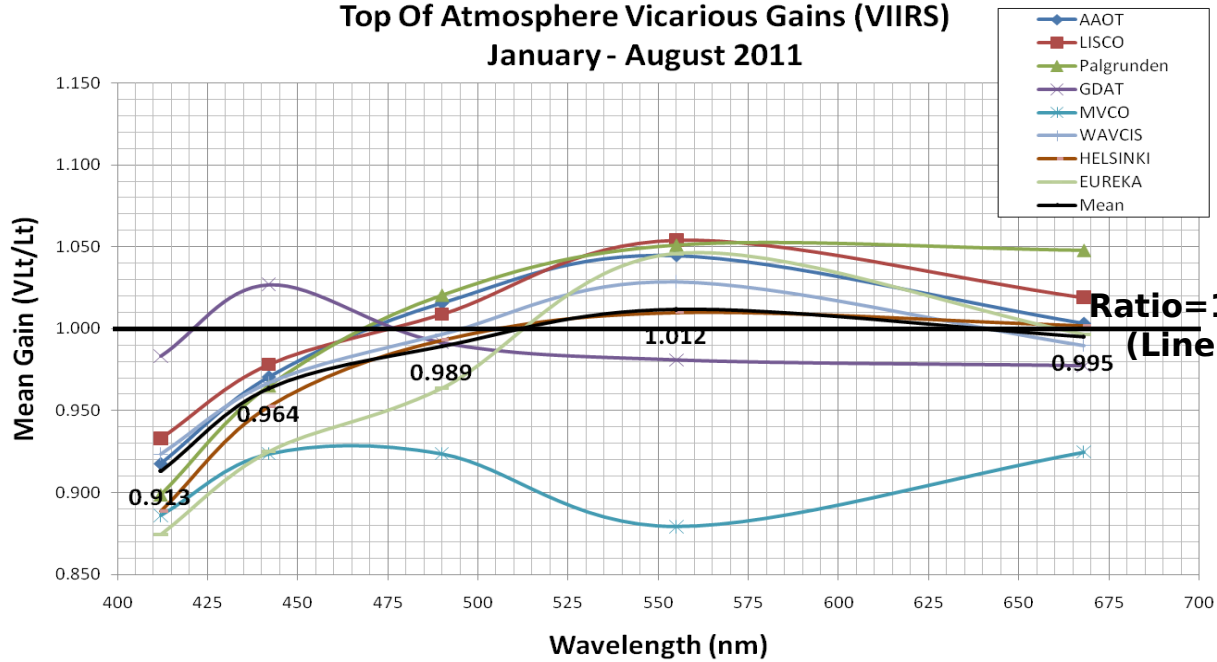
# Vicarious Calibration

# VIIRS Regional Vicarious Calibration (8)





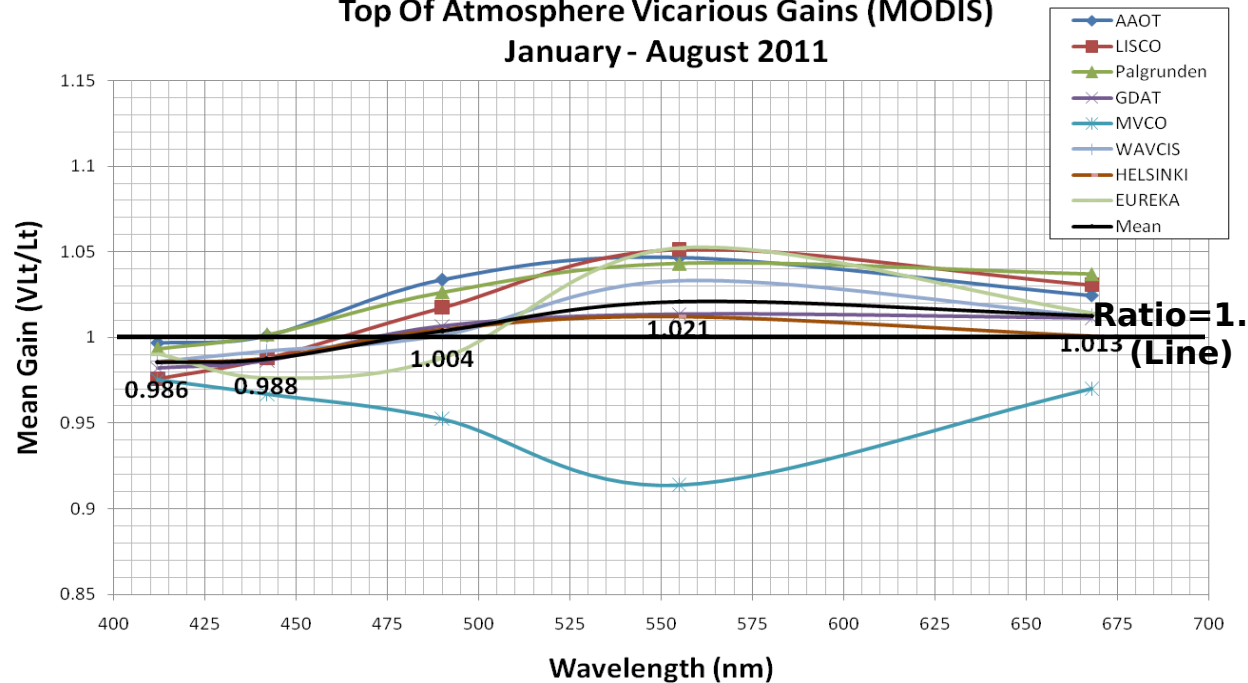
Top Of Atmosphere Vicarious Gains (VIIRS)  
January - August 2011



**VIIRS  
Regional  
Mean  
Gains**

**MODIS  
Regional  
Mean  
Gains**

Top Of Atmosphere Vicarious Gains (MODIS)  
January - August 2011



# AERONET-OC: AAOT - 2011 (as of August 22, 2011)

VC Match-ups: 192 (MERIS=34/MODIS=90/VIIRS=68)

VC Failures : 96 (MERIS=22/MODIS=45/VIIRS=29)

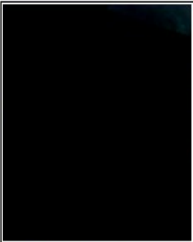
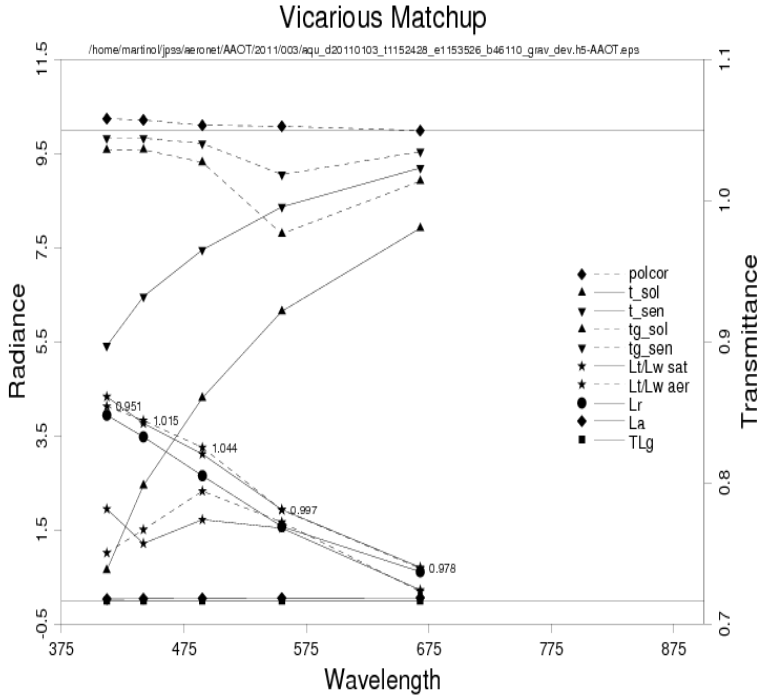

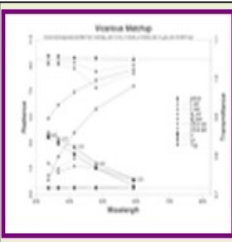
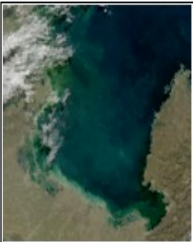
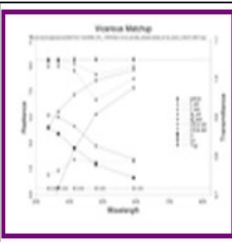

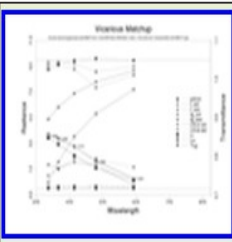
Total Runs : 666 (MERIS=131/MODIS=278/VIIRS=257)

## Legend

Not Run No AERONET VC Failure VC Good

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						<u>1</u> Runs: 2 Matches: 0
<u>2</u> Runs: 3 Matches: 0	<u>3</u> Runs: 4 Matches: 2	<u>4</u> Runs: 3 Matches: 0	<u>5</u> Runs: 4 Matches: 0	<u>6</u> Runs: 3 Matches: 0	<u>7</u> Runs: 6 Matches: 0	<u>8</u> Runs: 3 Matches: 0
<u>9</u> Runs: 4 Matches: 0	<u>10</u> Runs: 3 Matches: 0	<u>11</u> Runs: 4 Matches: 0	<u>12</u> Runs: 2 Matches: 0	<u>13</u> Runs: 3 Matches: 0	<u>14</u> Runs: 3 Matches: 0	<u>15</u> Runs: 1 Matches: 1
<u>16</u> Runs: 6 Matches: 0	<u>17</u> Runs: 3 Matches: 0	<u>18</u> Runs: 6 Matches: 0	<u>19</u> Runs: 3 Matches: 0	<u>20</u> Runs: 2 Matches: 0	<u>21</u> Runs: 3 Matches: 0	<u>22</u> Runs: 3 Matches: 0
<u>23</u> Runs: 4 Matches: 4	<u>24</u> Runs: 1 Matches: 0	<u>25</u> Runs: 2 Matches: 0	<u>26</u> Runs: 3 Matches: 0	<u>27</u> Runs: 4 Matches: 0	<u>28</u> Runs: 2 Matches: 0	<u>29</u> Runs: 2 Matches: 0
<u>30</u> Runs: 3	<u>31</u> Runs: 1	<u>32</u> Runs: 3	<u>33</u> Runs: 1	<u>34</u> Runs: 2	<u>35</u> Runs: 1	<u>36</u> Runs: 2

## 4 Satellite Passes Over AAOT

Sensor	Time	RGB	Flags	Vicarious Results		Plot of Gains
VIIRS	11:51:31		information unavailable	Pass does not cover AAOT		<p>Vicarious Matchup</p> 
VIIRS	11:52:42		COCCOLITH TURBIDW ATMWARN HIPOL OCEAN		<a href="#">XML</a> <a href="#">HDF</a>	
MERIS	09:18:36		CLDICE HISOLZEN		<a href="#">XML</a> <a href="#">HDF</a>	
AQUA	11:50:00		COCCOLITH TURBIDW HIPOL OCEAN		<a href="#">XML</a> <a href="#">HDF</a>	

AERONET-OC: Eureka - 2011 (as of August 17, 2011)

VC Match-ups: 75 (MERIS=15/MODIS=33/VIIRS=27)  
VC Failures : 0 (MERIS=0/MODIS=0/VIIRS=0)  
Total Runs : 532 (MERIS=96/MODIS=239/VIIRS=197)

Legend						
Not Run	No AERONET	VC Failure	VC Good			

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Runs: 2 Matches: 0
2 Runs: 1 Matches: 0	3 Runs: 1 Matches: 0	4 Runs: 1 Matches: 0	5 Runs: 1 Matches: 0	6 Runs: 2 Matches: 0	7 Runs: 1 Matches: 0	8 Runs: 1 Matches: 0
9 Runs: 1 Matches: 0	10 Runs: 1 Matches: 0	11 Runs: 1 Matches: 0	12 Runs: 1 Matches: 0	13 Runs: 1 Matches: 0	14 Runs: 1 Matches: 0	15 Runs: 1 Matches: 0
16 Runs: 1 Matches: 0	17 Runs: 3 Matches: 0	18 Runs: 1 Matches: 0	19 Runs: 1 Matches: 0	20 Runs: 2 Matches: 0	21 Runs: 2 Matches: 0	22 Runs: 2 Matches: 0
23 Runs: 2 Matches: 0	24 Runs: 1 Matches: 0	25 Runs: 3 Matches: 0	26 Runs: 4 Matches: 0	27 Runs: 3 Matches: 0	28 Runs: 3 Matches: 0	29 Runs: 3 Matches: 0
30 Runs: 1 Matches: 0	31 Runs: 2 Matches: 0	32 Runs: 2 Matches: 0	33 Runs: 5 Matches: 0	34 Runs: 3 Matches: 0	35 Runs: 3 Matches: 0	36 Runs: 3 Matches: 0
37 Runs: 4 Matches: 0	38 Runs: 4 Matches: 0	39 Runs: 3 Matches: 0	40 Runs: 5 Matches: 0	41 Runs: 3 Matches: 0	42 Runs: 3 Matches: 0	43 Runs: 4 Matches: 0
44 Runs: 2 Matches: 0	45 Runs: 3 Matches: 0	46 Runs: 3 Matches: 0	47 Runs: 2 Matches: 0	48 Runs: 4 Matches: 0	49 Runs: 7 Matches: 0	50 Runs: 4 Matches: 0
51 Runs: 4 Matches: 0	52 Runs: 3 Matches: 0	53 Runs: 2 Matches: 0	54 Runs: 3 Matches: 0	55 Runs: 1 Matches: 0	56 Runs: 2 Matches: 0	57 Runs: 2 Matches: 0
58 Runs: 2 Matches: 0	59 Runs: 3 Matches: 0	60 Runs: 2 Matches: 0	61 Runs: 2 Matches: 0	62 Runs: 2 Matches: 0	63 Runs: 1 Matches: 0	64 Runs: 2 Matches: 0

AERONET-OC: Cove - 2011 (as of August 18, 2011)

VC Match-ups: 0 (MERIS=0/MODIS=0/VIIRS=0)  
VC Failures : 57 (MERIS=6/MODIS=26/VIIRS=25)  
Total Runs : 537 (MERIS=100/MODIS=207/VIIRS=230)

Legend						
Not Run	No AERONET	VC Failure	VC Good			

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Runs: 4 Matches: 0
2 Runs: 3 Matches: 0	3 Runs: 2 Matches: 0	4 Runs: 5 Matches: 0	5 Runs: 2 Matches: 0	6 Runs: 5 Matches: 0	7 Runs: 3 Matches: 0	8 Runs: 1 Matches: 0
9 Runs: 2 Matches: 0	10 Runs: 4 Matches: 0	11 Runs: 3 Matches: 0	12 Runs: 4 Matches: 0	13 Runs: 6 Matches: 0	14 Runs: 1 Matches: 0	15 Runs: 1 Matches: 0
16 Runs: 2 Matches: 0	17 Runs: 3 Matches: 0	18 Runs: 2 Matches: 0	19 Runs: 2 Matches: 0	20 Runs: 4 Matches: 0	21 Runs: 4 Matches: 0	22 Runs: 5 Matches: 0
23 Runs: 4 Matches: 0	24 Runs: 0 Matches: 0	25 Runs: 4 Matches: 0	26 Runs: 3 Matches: 0	27 Runs: 2 Matches: 0	28 Runs: 3 Matches: 0	29 Runs: 5 Matches: 0
30 Runs: 2 Matches: 0	31 Runs: 3 Matches: 0	32 Runs: 2 Matches: 0	33 Runs: 3 Matches: 0	34 Runs: 4 Matches: 0	35 Runs: 3 Matches: 0	36 Runs: 6 Matches: 0
37 Runs: 3 Matches: 0	38 Runs: 5 Matches: 0	39 Runs: 3 Matches: 0	40 Runs: 2 Matches: 0	41 Runs: 2 Matches: 0	42 Runs: 3 Matches: 0	43 Runs: 2 Matches: 0
44 Runs: 4 Matches: 0	45 Runs: 7 Matches: 0	46 Runs: 3 Matches: 0	47 Runs: 3 Matches: 0	48 Runs: 3 Matches: 0	49 Runs: 2 Matches: 0	50 Runs: 2 Matches: 0
51 Runs: 3 Matches: 0	52 Runs: 3 Matches: 0	53 Runs: 3 Matches: 0	54 Runs: 4 Matches: 0	55 Runs: 3 Matches: 0	56 Runs: 1 Matches: 0	57 Runs: 1 Matches: 0
58 Runs: 3 Matches: 0	59 Runs: 4 Matches: 0	60 Runs: 1 Matches: 0	61 Runs: 3 Matches: 0	62 Runs: 3 Matches: 0	63 Runs: 1 Matches: 0	64 Runs: 2 Matches: 0

AERONET-OC: LISCO - 2011 (as of August 17, 2011)

VC Match-ups: 122 (MERIS=24/MODIS=61/VIIRS=37)  
VC Failures : 90 (MERIS=15/MODIS=40/VIIRS=35)  
Total Runs : 653 (MERIS=123/MODIS=274/VIIRS=256)

Legend						
Not Run	No AERONET	VC Failure	VC Good			

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Runs: 6 Matches: 0
2 Runs: 2 Matches: 0	3 Runs: 2 Matches: 0	4 Runs: 3 Matches: 0	5 Runs: 2 Matches: 0	6 Runs: 5 Matches: 0	7 Runs: 3 Matches: 0	8 Runs: 4 Matches: 0
9 Runs: 4 Matches: 2	10 Runs: 4 Matches: 4	11 Runs: 3 Matches: 0	12 Runs: 3 Matches: 0	13 Runs: 3 Matches: 2	14 Runs: 1 Matches: 0	15 Runs: 2 Matches: 0
16 Runs: 2 Matches: 2	17 Runs: 5 Matches: 3	18 Runs: 2 Matches: 0	19 Runs: 3 Matches: 0	20 Runs: 4 Matches: 0	21 Runs: 4 Matches: 3	22 Runs: 7 Matches: 0
23 Runs: 3 Matches: 2	24 Runs: 3 Matches: 2	25 Runs: 3 Matches: 0	26 Runs: 3 Matches: 0	27 Runs: 2 Matches: 0	28 Runs: 3 Matches: 0	29 Runs: 3 Matches: 0
30 Runs: 3 Matches: 2	31 Runs: 6 Matches: 2	32 Runs: 2 Matches: 0	33 Runs: 6 Matches: 0	34 Runs: 4 Matches: 0	35 Runs: 2 Matches: 0	36 Runs: 3 Matches: 0
37 Runs: 4 Matches: 3	38 Runs: 5 Matches: 0	39 Runs: 3 Matches: 0	40 Runs: 5 Matches: 0	41 Runs: 3 Matches: 2	42 Runs: 4 Matches: 3	43 Runs: 4 Matches: 0
44 Runs: 3 Matches: 0	45 Runs: 4 Matches: 2	46 Runs: 2 Matches: 2	47 Runs: 6 Matches: 4	48 Runs: 3 Matches: 0	49 Runs: 4 Matches: 0	50 Runs: 2 Matches: 0
51 Runs: 3 Matches: 2	52 Runs: 2 Matches: 0	53 Runs: 5 Matches: 3	54 Runs: 8 Matches: 3	55 Runs: 3 Matches: 0	56 Runs: 4 Matches: 0	57 Runs: 1 Matches: 0
58 Runs: 3 Matches: 2	59 Runs: 3 Matches: 0	60 Runs: 1 Matches: 0	61 Runs: 2 Matches: 0	62 Runs: 2 Matches: 0	63 Runs: 3 Matches: 0	64 Runs: 3 Matches: 0

AERONET-OC: WaveCIS - 2011 (as of August 18, 2011)

VC Match-ups: 61 (MERIS=11/MODIS=17/VIIRS=33)  
VC Failures : 46 (MERIS=15/MODIS=7/VIIRS=24)  
Total Runs : 363 (MERIS=84/MODIS=72/VIIRS=207)

Legend						
Not Run	No AERONET	VC Failure	VC Good			

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Runs: 2 Matches: 0
2 Runs: 1 Matches: 0	3 Runs: 3 Matches: 0	4 Runs: 2 Matches: 0	5 Runs: 4 Matches: 0	6 Runs: 4 Matches: 0	7 Runs: 2 Matches: 0	8 Runs: 3 Matches: 0
9 Runs: 1 Matches: 0	10 Runs: 5 Matches: 0	11 Runs: 1 Matches: 0	12 Runs: 2 Matches: 0	13 Runs: 1 Matches: 0	14 Runs: 0 Matches: 0	15 Runs: 0 Matches: 0
16 Runs: 2 Matches: 0	17 Runs: 3 Matches: 0	18 Runs: 2 Matches: 0	19 Runs: 4 Matches: 0	20 Runs: 1 Matches: 0	21 Runs: 2 Matches: 0	22 Runs: 3 Matches: 0
23 Runs: 1 Matches: 0	24 Runs: 1 Matches: 0	25 Runs: 2 Matches: 0	26 Runs: 3 Matches: 0	27 Runs: 3 Matches: 0	28 Runs: 3 Matches: 0	29 Runs: 2 Matches: 0
30 Runs: 3 Matches: 0	31 Runs: 2 Matches: 0	32 Runs: 2 Matches: 0	33 Runs: 3 Matches: 0	34 Runs: 1 Matches: 0	35 Runs: 2 Matches: 0	36 Runs: 2 Matches: 0
37 Runs: 2 Matches: 0	38 Runs: 4 Matches: 0	39 Runs: 2 Matches: 0	40 Runs: 3 Matches: 0	41 Runs: 3 Matches: 0	42 Runs: 5 Matches: 0	43 Runs: 2 Matches: 2
44 Runs: 3 Matches: 0	45 Runs: 1 Matches: 0	46 Runs: 2 Matches: 0	47 Runs: 1 Matches: 0	48 Runs: 1 Matches: 0	49 Runs: 3 Matches: 0	50 Runs: 0 Matches: 0

# Vicarious Calibration and SAVANT matchup

- January 2011 – August 22, 2011

SITE NAME	Total # SeaPrism values	No matchup for VIIRS	No VIIRS (Vicar, Cal) SAVANT	No matchup for MODIS	No of MODIS (Vicar Car) SAVANT	# VIIRS (VC) CSV	# MODIS (VC) CSV
AAOT	469	65	67	105	89	68	90
LISCO	467	50	36	71	60	37	61
PALG	229	63	27	105	20	26	19
GDAT	131	85	24	172	23	24	23
MVCO	143	47	12	73	16	13	17
WAVCIS	294	31	33	74	16	33	17
HELSINKI	125	67	23	147	29	22	30
EUREKA	91	74	16	53	20	16	20

# VICARIOUS CALIBRATION MATCH-UP STATISTICS

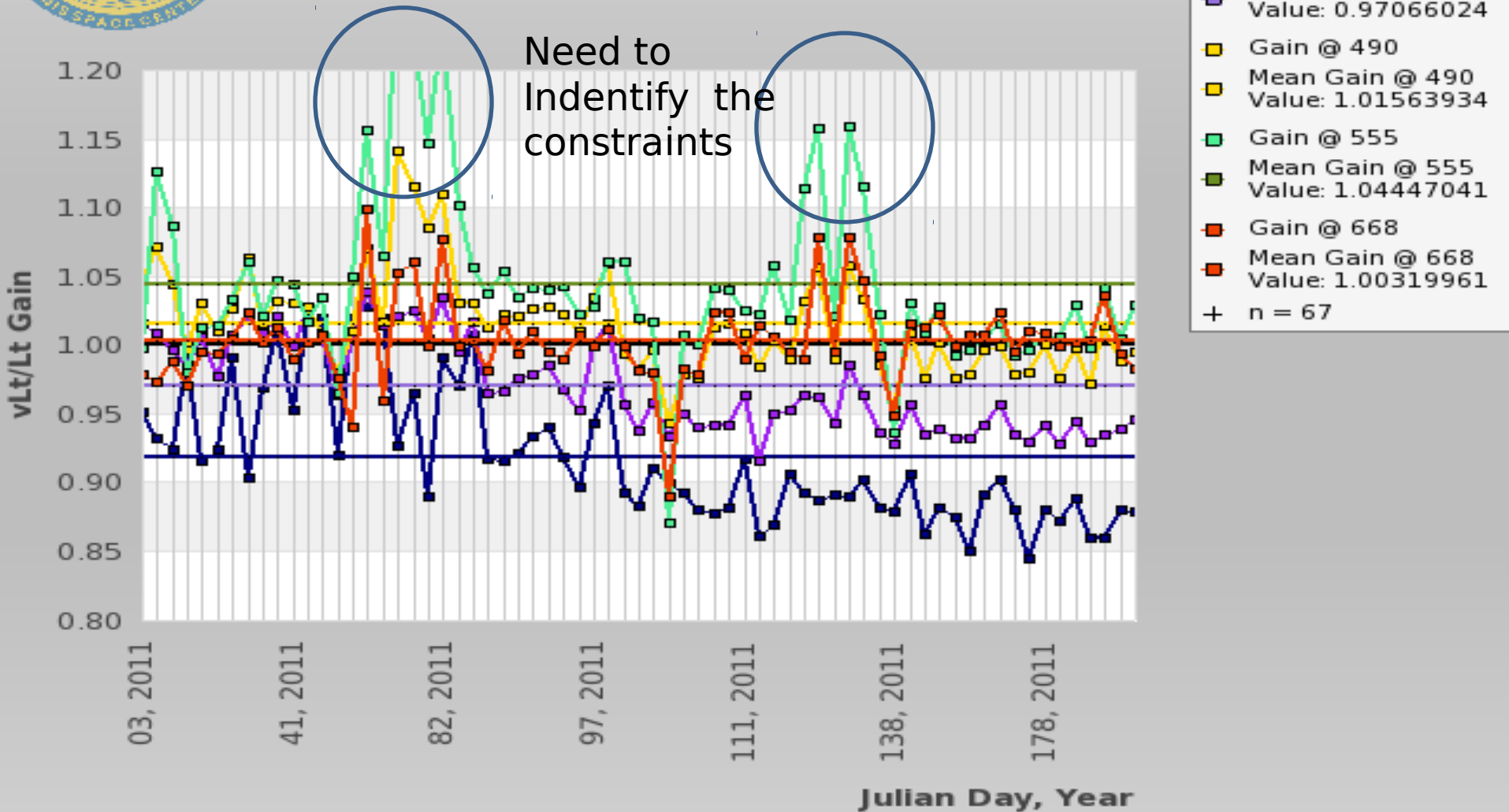
January 2011 - August 22, 2011

Site	#VC						#VC	
Name	Matchups		MERIS	MODIS	VIIRS	Failures	MERIS	
MODIS	VIIRS							
AAOT	192		34	90	68	96		
22	45	29						
LISCO	122		24	61	37	90		
15	40	35						
PALG	61		16	19	26	27		
13	5	9						
GDAT	68		21	23	24	35		
7	14	14						
MVCO	37		7	17	13	43		
8	19	16						

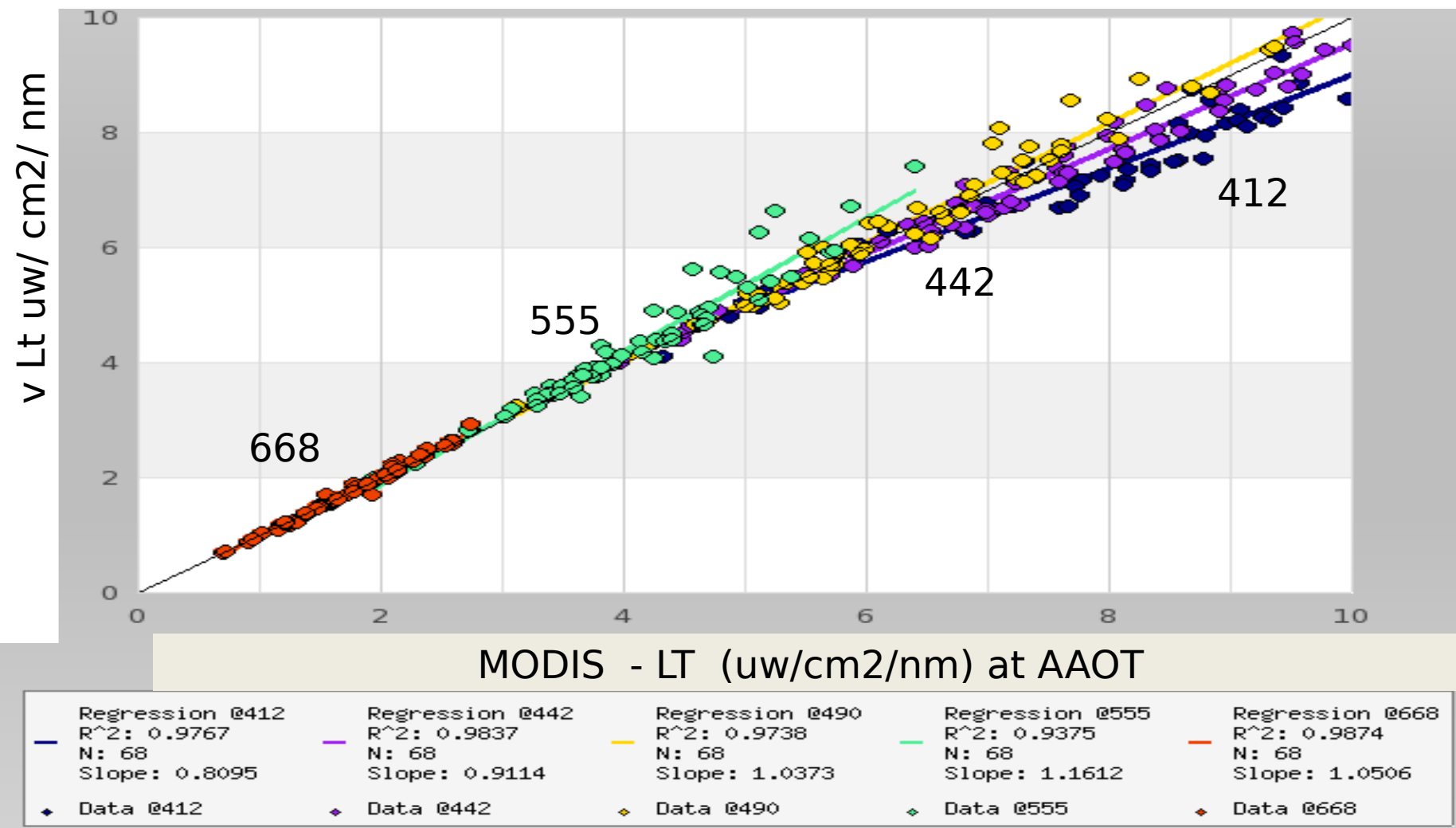
# Spectral Gains



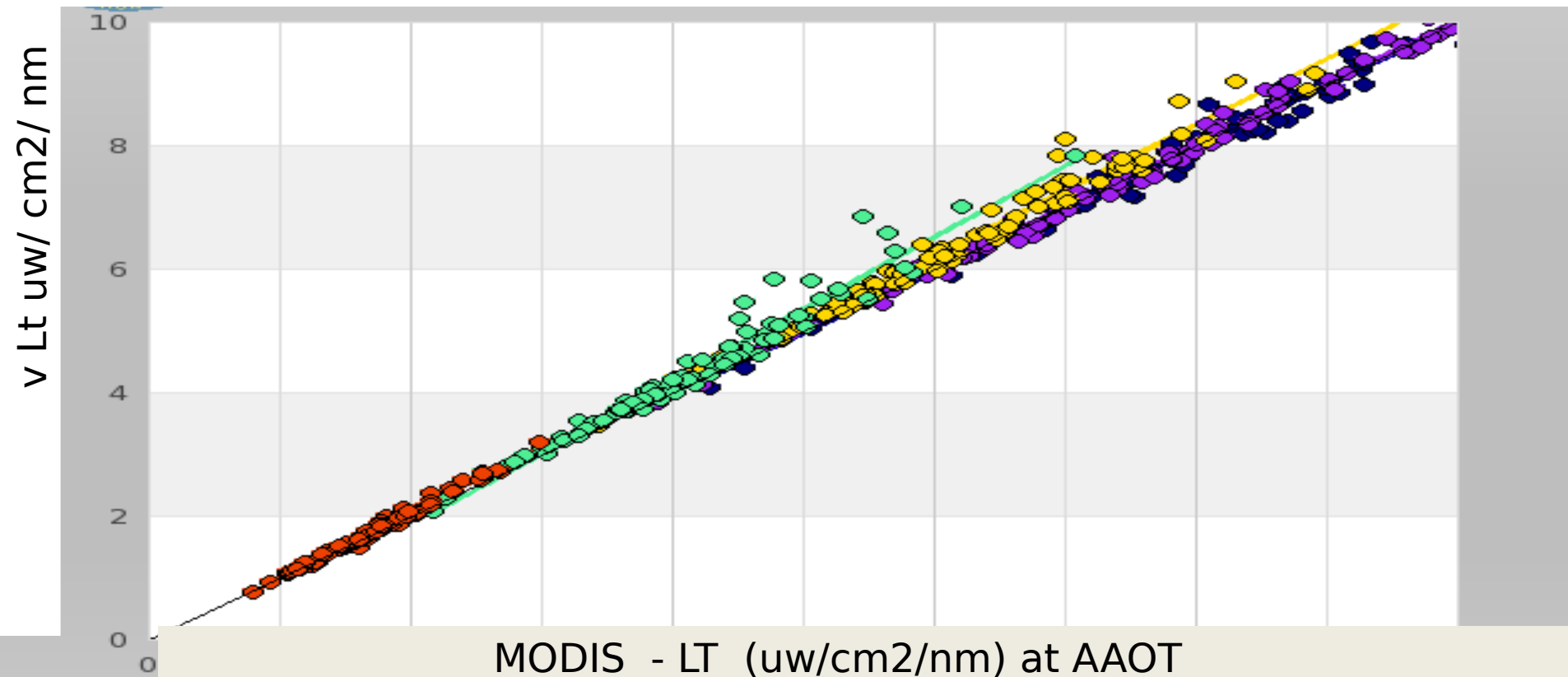
## Venice - AAOT - Time series



# AAOT - Vicarious calibration to TOA. - LT Spectral Gain - not applied



# MODIS - AAOT - Vicarious calibration - Tighter fit ..

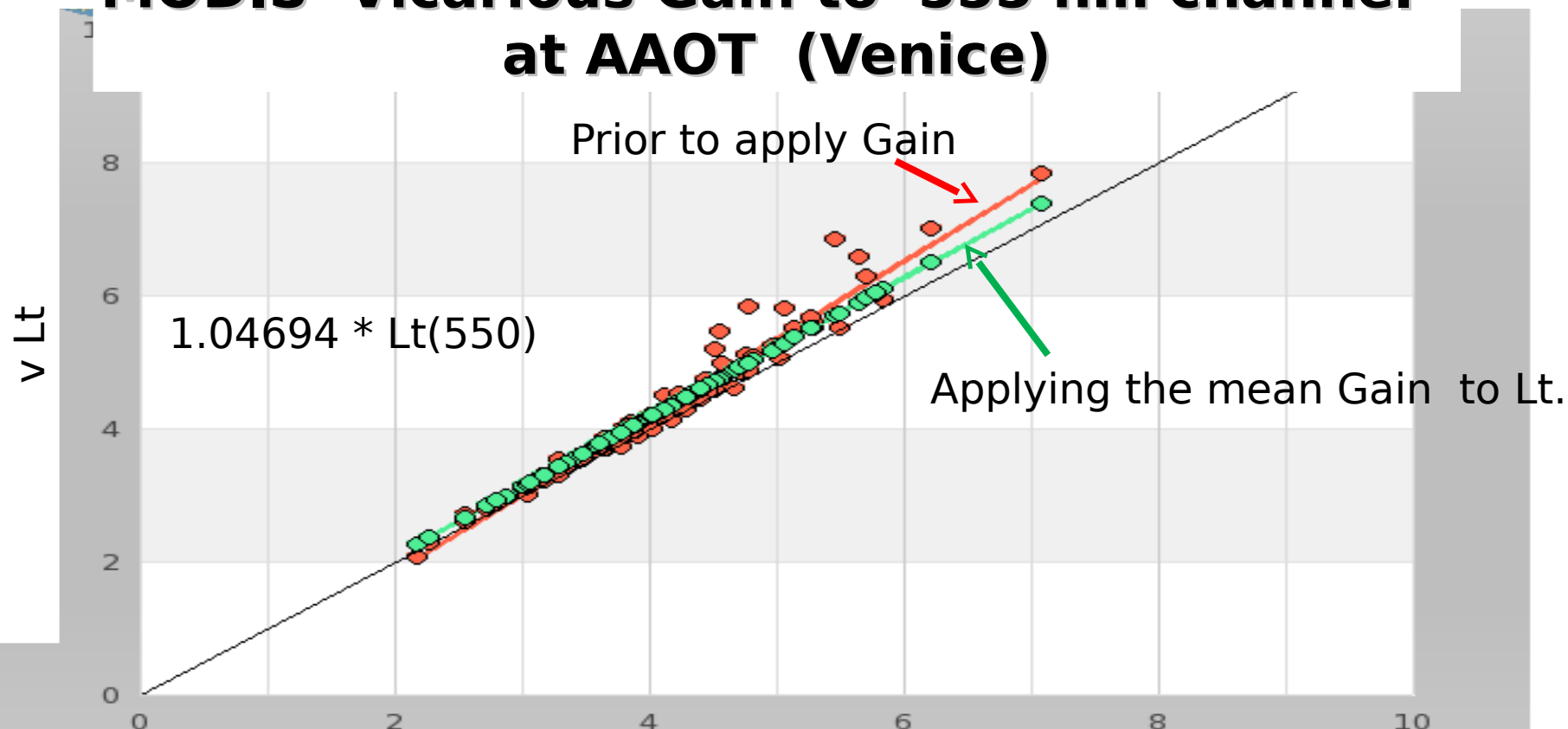


## Observed Lt Value

Regression @412 $R^2$ : 0.9898 N: 90 Slope: 1.0058 ◆ Data @412	Regression @442 $R^2$ : 0.9931 N: 90 Slope: 1.0031 ◆ Data @442	Regression @490 $R^2$ : 0.9805 N: 90 Slope: 1.0696 ◆ Data @490	Regression @555 $R^2$ : 0.9583 N: 90 Slope: 1.1664 ◆ Data @555	Regression @668 $R^2$ : 0.989 N: 90 Slope: 1.0704 ◆ Data @668
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# Applied Channel Gains

## MODIS Vicarious Gain to 555 nm channel at AAOT (Venice)



MODIS - LT (uw/cm2/nm) at AAOT

Computed Vicarious calibration

Gain Applied to MODIS

Regression @555

$R^2$ : 0.9583

N: 90

Slope: 1.1664

Data @555

Calibrated Regression @555

$R^2$ : 1

N: 90

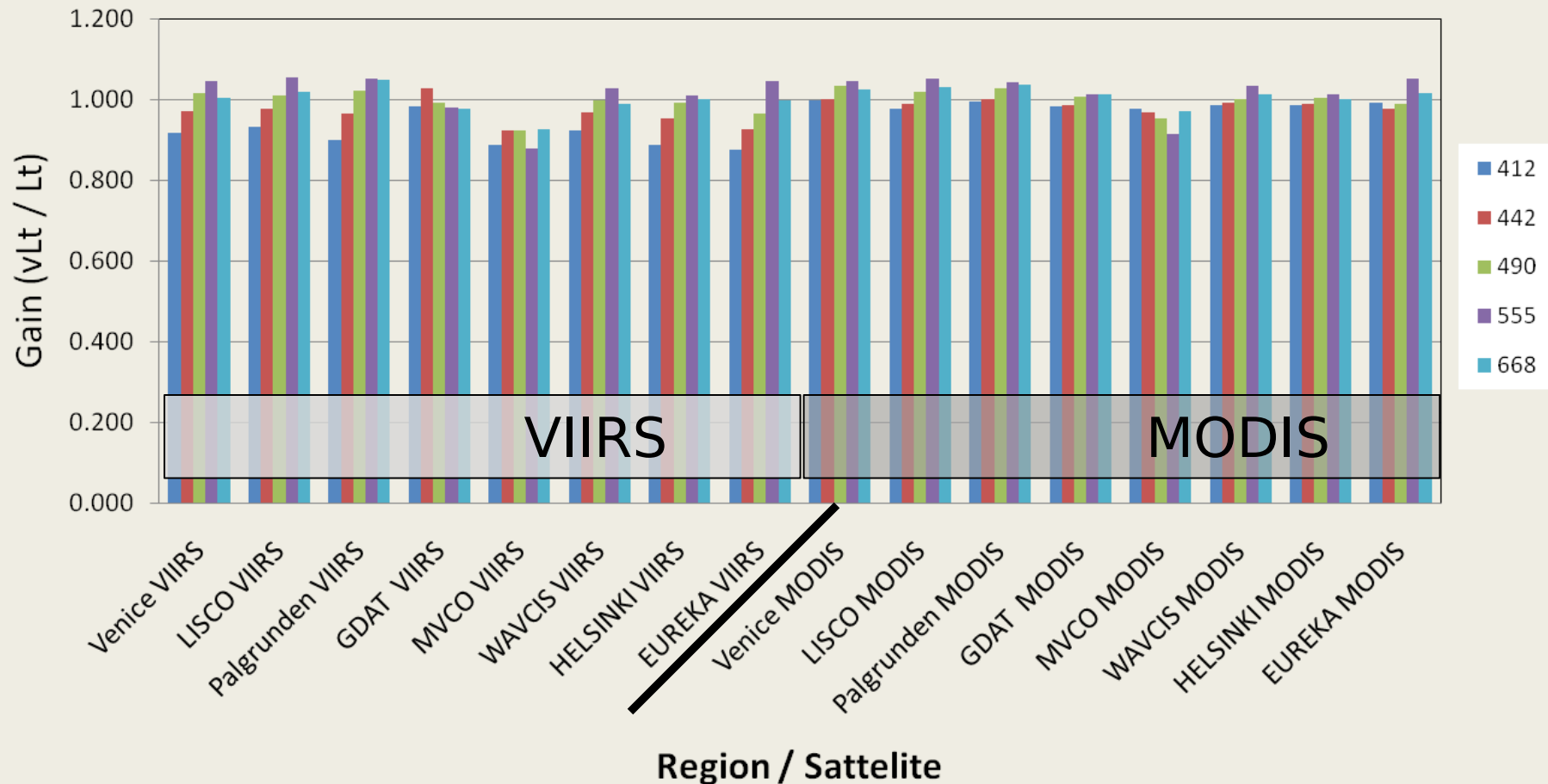
Slope: 1.0463

Calibrated Data @555

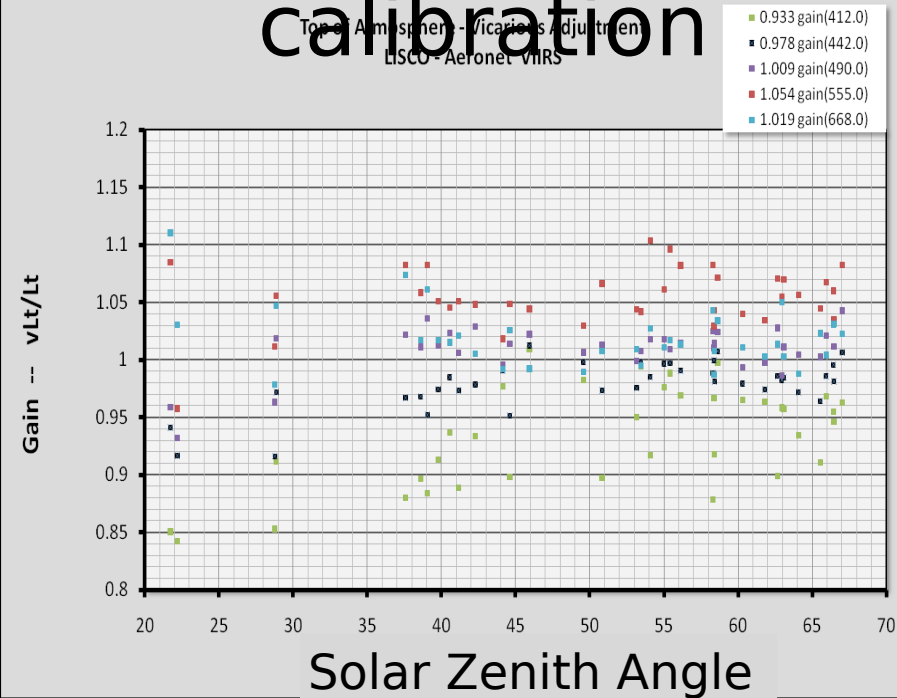
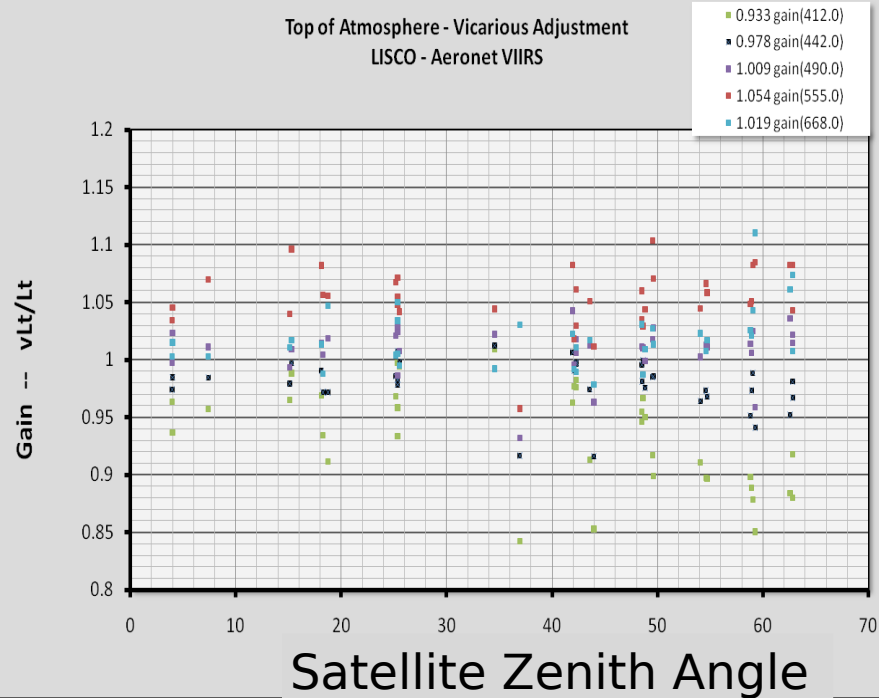
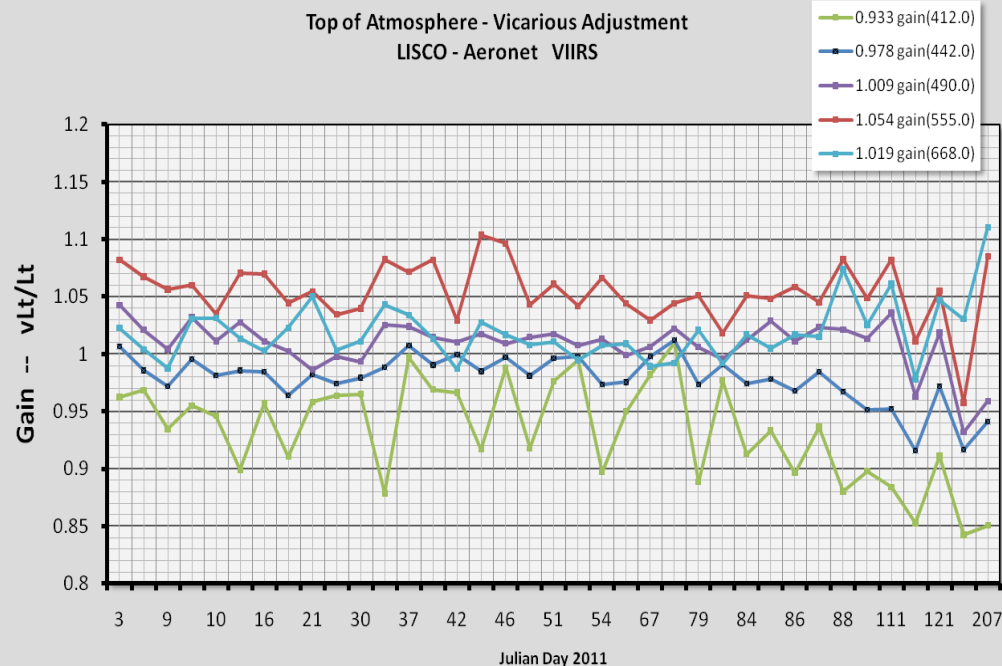


# Real time monitoring Regional Vicarious Adjustment

Top Of Atmosphere Vicarious Adjustment (JAN - AUG 2011)  
7 Sites / 2 Satellites / 7 Seaprisms



# LISCO Aeronet VIIRS - vicarious calibration



# GYRES - re - established - reprocesses

SAVANT

REHFARSAL LINKS

[Comparison Tool](#) | [Vicarious Calibration](#) | [Gyre Monitoring](#) | [Regional Pages](#) | [Data Calendar](#) | [Updates/Status](#) | [Help Page](#)

## Gyre Monitoring

### Query Type:

### Satellite Data:

### Exclusion Criteria:

Location:

Start Date:

End Date:

☐ VIIRS

☒ MODIS

☐ MERIS

\* Does not have a wavelength; choose "0"  
\*\* Has an algorithm; change from null.  
\*, \*\* The system does some sanity checking for you.  
See table [on help page](#) for algorithm-wavelength-product combinations.

APS Processing Version:

Minimum Value:  Maximum Value:

Maximum Coefficient of Variance:

Minimum Percent Valid Pixels:

**Plans - sensor to sensor Vicarious calibration ..**  
**- create "Synthetic Aeronet Sites" from MODIS for VIIRS**  
**- enable gain factors applied to VIIRS to**

# **Ocean EDR Summary**

- **Plans**
- **Evaluate vicarious cal val tool**
  - **Containing the matchup tool**
- **Feedback to SDR team**
- **Apply “gains” to satellite SDR processing (LUT)**
- **Apply uncertainty index to Vicarious calibration (aeronet OC)**
- **Develop “synthetic” Aeronet capability**
  - **sensor - sensor**

## AERONET-OC: Palgrunden - 2011 (as of August 17, 2011)

VC Match-ups: 61 (MERIS=16 MODIS=19 VIIRS=26)

VC Failures: 27 (MERIS=13 MODIS=5 VIIRS=9)

Total Runs: 574 (MERIS=173 MODIS=146 VIIRS=255)

Legend						
Not Run	No AERONET	VC Failure	VC Good			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Runs: 1 Matches: 0
2 Runs: 1 Matches: 0	3 Runs: 1 Matches: 0	4 Runs: 1 Matches: 0	5 Runs: 1 Matches: 0	6 Runs: 1 Matches: 0	7 Runs: 0 Matches: 0	8 Runs: 1 Matches: 0
9 Runs: 1 Matches: 0	10 Runs: 2 Matches: 0	11 Runs: 0 Matches: 0	12 Runs: 0 Matches: 0	13 Runs: 1 Matches: 0	14 Runs: 1 Matches: 0	15 Runs: 0 Matches: 0
16 Runs: 0 Matches: 0	17 Runs: 1 Matches: 0	18 Runs: 2 Matches: 0	19 Runs: 1 Matches: 0	20 Runs: 1 Matches: 0	21 Runs: 2 Matches: 0	22 Runs: 3 Matches: 0
23 Runs: 2 Matches: 0	24 Runs: 1 Matches: 0	25 Runs: 2 Matches: 0	26 Runs: 3 Matches: 0	27 Runs: 1 Matches: 0	28 Runs: 2 Matches: 0	29 Runs: 2 Matches: 0
30 Runs: 2 Matches: 0	31 Runs: 3 Matches: 0	32 Runs: 1 Matches: 0	33 Runs: 1 Matches: 0	34 Runs: 3 Matches: 0	35 Runs: 2 Matches: 0	36 Runs: 2 Matches: 0
37 Runs: 2 Matches: 0	38 Runs: 4 Matches: 0	39 Runs: 3 Matches: 0	40 Runs: 5 Matches: 0	41 Runs: 2 Matches: 0	42 Runs: 3 Matches: 0	43 Runs: 4 Matches: 0
44 Runs: 2 Matches: 0	45 Runs: 2 Matches: 0	46 Runs: 2 Matches: 0	47 Runs: 3 Matches: 0	48 Runs: 3 Matches: 0	49 Runs: 5 Matches: 0	50 Runs: 0 Matches: 0
51 Runs: 4 Matches: 0	52 Runs: 3 Matches: 0	53 Runs: 4 Matches: 0	54 Runs: 3 Matches: 0	55 Runs: 3 Matches: 0	56 Runs: 2 Matches: 0	57 Runs: 2 Matches: 0
58 Runs: 2 Matches: 0	59 Runs: 3 Matches: 0	60 Runs: 2 Matches: 0	61 Runs: 2 Matches: 0	62 Runs: 3 Matches: 0	63 Runs: 5 Matches: 0	64 Runs: 1 Matches: 0
65 Runs: 3 Matches: 0	66 Runs: 5 Matches: 0	67 Runs: 3 Matches: 0	68 Runs: 2 Matches: 0	69 Runs: 2 Matches: 0	70 Runs: 4 Matches: 0	71 Runs: 3 Matches: 0
72 Runs: 4 Matches: 0	73 Runs: 4 Matches: 0	74 Runs: 5 Matches: 0	75 Runs: 2 Matches: 0	76 Runs: 2 Matches: 0	77 Runs: 0 Matches: 0	78 Runs: 2 Matches: 0
79 Runs: 3 Matches: 0	80 Runs: 3 Matches: 0	81 Runs: 3 Matches: 0	82 Runs: 4 Matches: 0	83 Runs: 5 Matches: 0	84 Runs: 3 Matches: 0	85 Runs: 4 Matches: 0
86 Runs: 4 Matches: 0	87 Runs: 2 Matches: 0	88 Runs: 3 Matches: 0	89 Runs: 4 Matches: 0	90 Runs: 4 Matches: 0	91 Runs: 4 Matches: 0	92 Runs: 4 Matches: 0
93 Runs: 5 Matches: 0	94 Runs: 2 Matches: 0	95 Runs: 4 Matches: 0	96 Runs: 2 Matches: 0	97 Runs: 3 Matches: 0	98 Runs: 4 Matches: 0	99 Runs: 4 Matches: 0
100 Runs: 2 Matches: 0	101 Runs: 3 Matches: 0	102 Runs: 6 Matches: 0	103 Runs: 4 Matches: 0	104 Runs: 4 Matches: 0	105 Runs: 2 Matches: 0	106 Runs: 2 Matches: 0
107 Runs: 0 Matches: 0	108 Runs: 3 Matches: 0	109 Runs: 4 Matches: 0	110 Runs: 4 Matches: 0	111 Runs: 3 Matches: 0	112 Runs: 2 Matches: 0	113 Runs: 3 Matches: 0
114 Runs: 4 Matches: 0	115 Runs: 5 Matches: 0	116 Runs: 3 Matches: 0	117 Runs: 3 Matches: 0	118 Runs: 4 Matches: 0	119 Runs: 4 Matches: 0	120 Runs: 5 Matches: 0
121 Runs: 4 Matches: 0	122 Runs: 3 Matches: 0	123 Runs: 3 Matches: 0	124 Runs: 5 Matches: 0	125 Runs: 3 Matches: 0	126 Runs: 3 Matches: 0	127 Runs: 3 Matches: 0
128 Runs: 2 Matches: 0	129 Runs: 3 Matches: 0	130 Runs: 4 Matches: 0	131 Runs: 4 Matches: 0	132 Runs: 1 Matches: 0	133 Runs: 2 Matches: 0	134 Runs: 2 Matches: 0
135 Runs: 3 Matches: 0	136 Runs: 4 Matches: 0	137 Runs: 5 Matches: 0	138 Runs: 6 Matches: 0	139 Runs: 4 Matches: 0	140 Runs: 3 Matches: 0	141 Runs: 4 Matches: 0
142 Runs: 3 Matches: 0	143 Runs: 3 Matches: 0	144 Runs: 3 Matches: 0	145 Runs: 3 Matches: 0	146 Runs: 4 Matches: 0	147 Runs: 4 Matches: 0	148 Runs: 3 Matches: 0
149 Runs: 4 Matches: 0	150 Runs: 4 Matches: 0	151 Runs: 1 Matches: 0	152 Runs: 2 Matches: 0	153 Runs: 4 Matches: 0	154 Runs: 4 Matches: 0	155 Runs: 5 Matches: 0

## AERONET-OC: MVCO - 2011 (as of August 17, 2011)

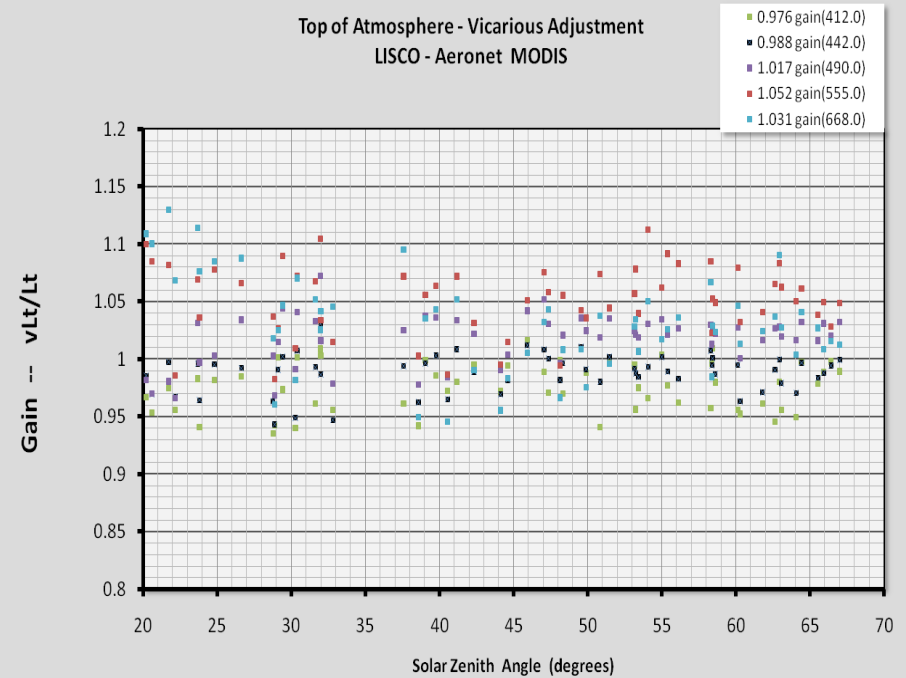
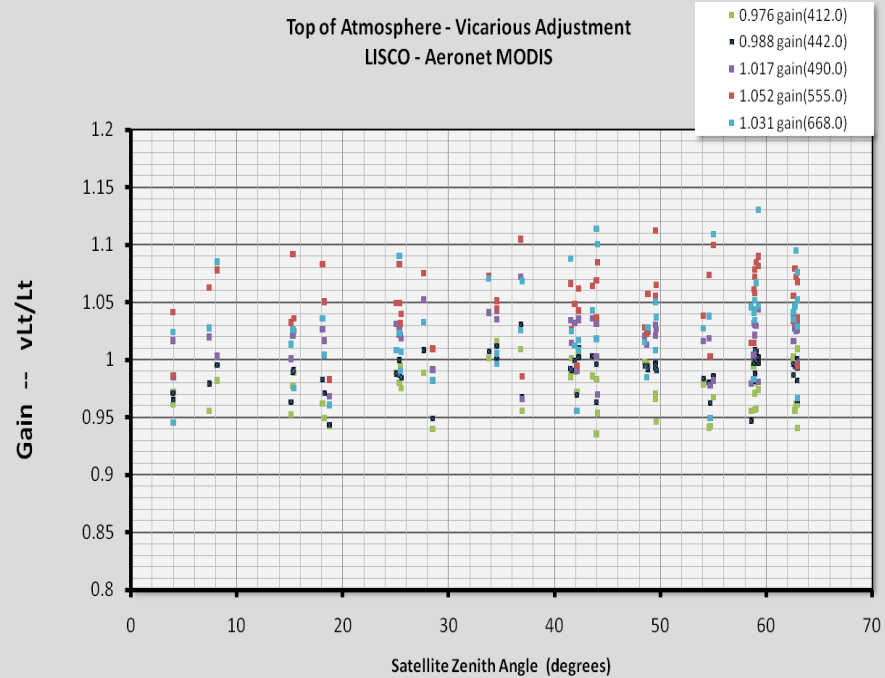
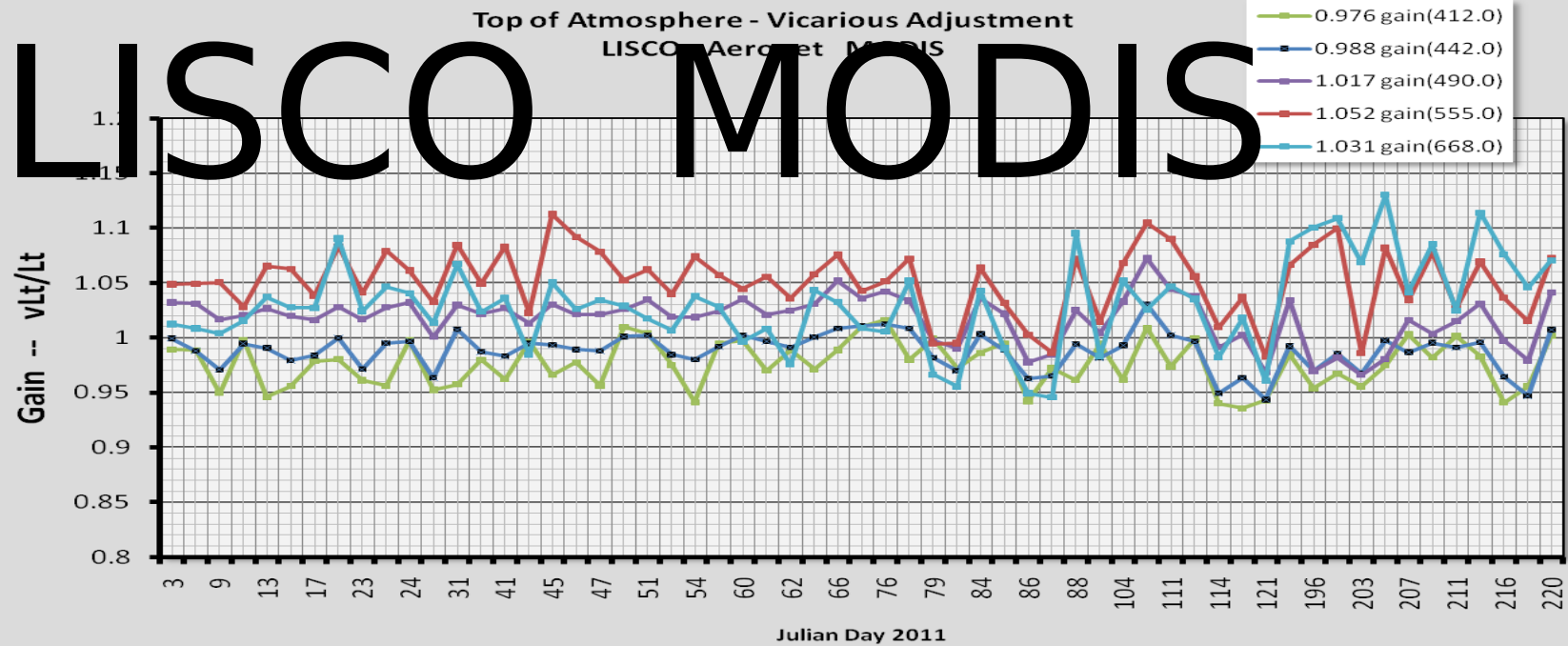
VC Match-ups: 37 (MERIS=7 MODIS=17 VIIRS=13)

VC Failures: 43 (MERIS=6 MODIS=19 VIIRS=16)

Total Runs: 678 (MERIS=128 MODIS=279 VIIRS=271)

Legend						
Not Run	No AERONET	VC Failure	VC Good			
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1 Runs: 7 Matches: 0
2 Runs: 2 Matches: 0	3 Runs: 5 Matches: 0	4 Runs: 3 Matches: 0	5 Runs: 3 Matches: 0	6 Runs: 2 Matches: 0	7 Runs: 4 Matches: 0	8 Runs: 5 Matches: 0
9 Runs: 4 Matches: 0	10 Runs: 5 Matches: 0	11 Runs: 3 Matches: 0	12 Runs: 4 Matches: 0	13 Runs: 5 Matches: 0	14 Runs: 1 Matches: 0	15 Runs: 1 Matches: 0
16 Runs: 2 Matches: 0	17 Runs: 4 Matches: 0	18 Runs: 5 Matches: 0	19 Runs: 5 Matches: 0	20 Runs: 4 Matches: 0	21 Runs: 5 Matches: 0	22 Runs: 5 Matches: 0
23 Runs: 3 Matches: 0	24 Runs: 5 Matches: 0	25 Runs: 3 Matches: 0	26 Runs: 6 Matches: 0	27 Runs: 5 Matches: 0	28 Runs: 3 Matches: 0	29 Runs: 3 Matches: 0
30 Runs: 3 Matches: 0	31 Runs: 4 Matches: 0	32 Runs: 2 Matches: 0	33 Runs: 6 Matches: 0	34 Runs: 4 Matches: 0	35 Runs: 6 Matches: 0	36 Runs: 2 Matches: 0
37 Runs: 4 Matches: 0	38 Runs: 4 Matches: 0	39 Runs: 5 Matches: 0	40 Runs: 5 Matches: 0	41 Runs: 3 Matches: 0	42 Runs: 6 Matches: 0	43 Runs: 4 Matches: 0
44 Runs: 3 Matches: 0	45 Runs: 4 Matches: 0	46 Runs: 3 Matches: 0	47 Runs: 2 Matches: 0	48 Runs: 5 Matches: 0	49 Runs: 4 Matches: 0	50 Runs: 2 Matches: 0
51 Runs: 5 Matches: 0	52 Runs: 5 Matches: 0	53 Runs: 5 Matches: 0	54 Runs: 5 Matches: 0	55 Runs: 2 Matches: 0	56 Runs: 4 Matches: 0	57 Runs: 2 Matches: 0
58 Runs: 4 Matches: 0	59 Runs: 5 Matches: 0	60 Runs: 3 Matches: 0	61 Runs: 2 Matches: 0	62 Runs: 1 Matches: 0	63 Runs: 3 Matches: 0	64 Runs: 3 Matches: 0
65 Runs: 4 Matches: 0	66 Runs: 1 Matches: 0	67 Runs: 5 Matches: 0	68 Runs: 4 Matches: 0	69 Runs: 5 Matches: 0	70 Runs: 4 Matches: 0	71 Runs: 2 Matches: 0
72 Runs: 5 Matches: 0	73 Runs: 5 Matches: 0	74 Runs: 2 Matches: 0	75 Runs: 4 Matches: 0	76 Runs: 4 Matches: 0	77 Runs: 3 Matches: 0	78 Runs: 2 Matches: 0
79 Runs: 3 Matches: 0	80 Runs: 3 Matches: 0	81 Runs: 5 Matches: 0	82 Runs: 2 Matches: 0	83 Runs: 4 Matches: 0	84 Runs: 4 Matches: 0	85 Runs: 4 Matches: 0
86 Runs: 5 Matches: 0	87 Runs: 7 Matches: 0	88 Runs: 3 Matches: 0	89 Runs: 3 Matches: 0	90 Runs: 5 Matches: 0	91 Runs: 5 Matches: 0	92 Runs: 3 Matches: 0
93 Runs: 2 Matches: 0	94 Runs: 3 Matches: 0	95 Runs: 3 Matches: 0	96 Runs: 3 Matches: 0	97 Runs: 6 Matches: 0	98 Runs: 3 Matches: 0	99 Runs: 6 Matches: 0
100 Runs: 2 Matches: 0	101 Runs: 2 Matches: 0	102 Runs: 3 Matches: 0	103 Runs: 4 Matches: 0	104 Runs: 3 Matches: 0	105 Runs: 3 Matches: 0	106 Runs: 4 Matches: 0
107 Runs: 1 Matches: 0	108 Runs: 2 Matches: 0	109 Runs: 2 Matches: 0	110 Runs: 4 Matches: 0	111 Runs: 4 Matches: 0	112 Runs: 1 Matches: 0	113 Runs: 7 Matches: 0
114 Runs: 2 Matches: 0	115 Runs: 6 Matches: 0	116 Runs: 2 Matches: 0	117 Runs: 5 Matches: 0	118 Runs: 5 Matches: 0	119 Runs: 3 Matches: 0	120 Runs: 4 Matches: 0
121 Runs: 3 Matches: 0	122 Runs: 4 Matches: 0	123 Runs: 3 Matches: 0	124 Runs: 3 Matches: 0	125 Runs: 4 Matches: 0	126 Runs: 2 Matches: 0	127 Runs: 3 Matches: 0
128 Runs: 3 Matches: 0	129 Runs: 5 Matches: 0	130 Runs: 4 Matches: 0	131 Runs: 5 Matches: 0	132 Runs: 2 Matches: 0	133 Runs: 2 Matches: 0	134 Runs: 1 Matches: 0
135 Runs: 3 Matches: 0	136 Runs: 6 Matches: 0	137 Runs: 3 Matches: 0	138 Runs: 6 Matches: 0	139 Runs: 3 Matches: 0	140 Runs: 4 Matches: 0	141 Runs: 4 Matches: 0
142 Runs: 2 Matches: 0	143 Runs: 4 Matches: 0	144 Runs: 4 Matches: 0	145 Runs: 5 Matches: 0	146 Runs: 2 Matches: 0	147 Runs: 5 Matches: 0	148 Runs: 3 Matches: 0
149 Runs: 4 Matches: 0	150 Runs: 3 Matches: 0	151 Runs: 2 Matches: 0	152 Runs: 5 Matches: 0	153 Runs: 2 Matches: 0	154 Runs: 4 Matches: 0	155 Runs: 5 Matches: 0

# LISCO MODIS





# modis Gain Factors Unconstrained Data

